

January 7, 2010

Hello,

As promised, here are additional materials for the MTCA/SMS Advisory Group meeting Monday, January 11, 2010. We have three topics on the agenda; this email provides background materials for the first and third topics. (Materials for the second topic – institutional controls and periodic reviews – were emailed Dec 31.)

I recognize you won't have lots of time to review these materials; we've organized these materials with this in mind. As always we appreciate very much your input and participation.

### **Topic 1: Background Concentrations**

We want to continue the background discussions from the last meeting. Chance Asher will be walking through some of the materials discussed with the Sediment Workgroup on this topic.

We also want to follow-up on Chris Waldron's observation at the December meeting that many background questions/issues are not unique to particular environmental media.

And also, conditions within a particular media may vary considerably. For example, the considerations pertaining to open water marine sediments may be different from fast flowing and dynamic freshwater river environments.

- How have you grappled with and resolved background-related issues at sites you have worked on.

### **Meeting materials**

The attached table (Background Table) provides a high level summary/comparison of background issues for soil, vapor intrusion and sediment contamination. We recognize that you will have limited time to look at this table in great detail. However, we would be interested in your thoughts on the following questions:

- The far left column of the table lists a number of issues and considerations related to how background levels are considered during the cleanup process. Does this organization capture the important considerations? If not, what is missing?

We recognize there are features related to specific media that make it difficult to extrapolate procedures from one media to another. For example, isolating soil on a particular site from surrounding soils is easier than trying to isolate sediments in a particular location from surrounding sediments. Sampling methods and costs also differ across media.

- What do you believe are important media-specific differences that should be considered when evaluating the background issue?
- Does this table capture the issues you have encountered?

### **Topic 3: Revisions to Cleanup Standards (preview of a wider discussion for Feb 22, 2010)**

Over the last 18 months, Ecology has identified a wide range of risk assessment and risk management issues associated with establishing cleanup levels. Based on new scientific information and federal risk assessment policies, we have identified three broad issues that could impact cleanup levels for individual hazardous substances or sites:

1. New or updated cancer slope factors and reference doses that are used to calculate risk-based cleanup levels when implementing the MTCA and SMS rules
2. New scientific information and regulatory guidance for evaluating child cancer risks
3. New scientific information and policies related to child lead exposure

These topics raise a number of scientific, policy, and practical implementation issues. Consequently, Ecology wants to have a thorough discussion on the rulemaking options (including arguments for and against different options) before developing a final rule proposal.

### Questions for January 11, 2010

We view the January 11<sup>th</sup> meeting as a starting point for these discussions. The attached materials are designed to provide a high-level orientation; we hope this will help lead to a robust discussion at future meetings.

We recognize that you will not have a lot of time to review the meeting materials, and appreciate your efforts. As you review these materials, please keep the following questions in mind:

- Do the materials provide you an initial sense of the issue? If not, what questions do you have for Ecology?
- We suspect that additional information will be needed to support a full discussion of these issues. What additional materials/information would you find useful on these issues? For example, would more numbers be helpful? More details on the basis for the numbers? Information on practical implications – detection limits, background levels, treatment levels? Approaches used by other states?
- All of these issues have been discussed and debated at the federal level. Have you or your organizations prepared analyses and comments on federal proposals? If so, could you provide them to Ecology for consideration in this process?

### Meeting Materials

Attached are the following meeting materials. Again, we recognize that you are receiving these only a few days before the meeting, and provide these as a starting point for ongoing discussions. (Remember, we are coming back to these topics February 22.)

## Risk Issues: PowerPoint Presentation

This presentation is for the afternoon portion of the January 11<sup>th</sup> meeting. It presentation provides a “Cliff Notes” version of the three broad risk assessment/management issues identified above.

## Risk Based Calculations handout

This handout includes three figures and four tables illustrating some of the underlying issues Ecology has identified over the last year.

Figure 1: MTCA Ground Water Cleanup Equations. Current MTCA equations and parameters for establishing ground water cleanup levels.

Figure 2: Ground Water Cleanup Equation with Age Adjustments in Exposure Parameters. This figure shows how to calculate cleanup levels taking into account the differences in exposure between adults and children. The equation and child-specific exposure parameters are based on the methods described in EPA’s Supplemental Guidance for Assessing Susceptibility from Early-Life Exposure to Carcinogens (EPA, March 2005).

Figure 3: Ground Water Cleanup Equations with Early-Life Stage Adjustments. This figure shows how to calculate cleanup levels taking into account recent scientific work and regulatory guidance on child susceptibility to chemical carcinogens. As with Figure 2, the equation and child-specific exposure parameters are based on the methods described in the Supplemental Guidance for Assessing Susceptibility from Early-Life Exposure to Carcinogens (EPA, March 2005). This equation also includes the Age Dependent Adjustment Factors (ADAFs) developed by EPA to account for the differences in child and adult susceptibility to carcinogens. The California Environmental Protection Agency has developed similar procedures. The California guidance applies these adjustments to all carcinogens whereas the EPA guidance focuses on carcinogens that are believed to act through a mutagenic mode of action.

Table 1: **Arsenic** – A Comparison of Ground Water Cleanup Level Options Using Current Toxicity Data and Risk Assessment Guidance. This table illustrates some of the practical implications for cleanup levels associated with using the new scientific information and regulatory guidance.

Table 2: **Benzene** – A Comparison of Ground Water Cleanup Level Options Using Current Toxicity Data and Risk Assessment Guidance. This table illustrates some of the practical implications for cleanup levels associated with the use of new scientific information and regulatory guidance.

Table 3: **Benzo[a]pyrene** – A Comparison of Ground Water Cleanup Level Options Using Current Toxicity Data and Risk Assessment Guidance. This table illustrates some of the

practical implications for cleanup levels associated with the use of new scientific information and regulatory guidance.

Table 4: Trichloroethylene – A Comparison of Ground Water Cleanup Level Options Using Current Toxicity Data and Risk Assessment Guidance. This table illustrates some of the practical implications for cleanup levels associated with the use of new scientific information and regulatory guidance.

## **Next Steps**

Following the January 11<sup>th</sup> meeting, Ecology will be working with a contractor team to structure future discussions. Currently, we are looking at the following steps:

February: More detailed discussion on technical and policy issues surrounding these issues, rulemaking options for addressing these issues, and practical implications for cleanup actions.

March and/or April: Discuss how these issues affect decision-making on soil and ground water cleanups, vapor intrusion sites, and sediment cleanup.

Spring: Preliminary evaluation of rule alternatives and draft rule revisions.

I'm looking forward to seeing you on Monday. As always, thanks for your continuing participation. It's important to us, and we at Ecology very much appreciate your willingness to dedicate time and energy to this effort. Thank you.

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Copies of these and all meeting materials will be available on Ecology web site at

<http://www.ecy.wa.gov/programs/tcp/regs/2009MTCA/AdvGrpMeetingInfo/AdvGrpMtgSchedule.html>